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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,042	09/19/2005	Robert William Eason	Dyouno283US	3973
23908	7590	05/10/2006	EXAMINER	
RENNER OTTO BOISSELLE & SKLAR, LLP			PALMER, PHAN T H	
1621 EUCLID AVENUE			ART UNIT	
NINETEENTH FLOOR			PAPER NUMBER	
CLEVELAND, OH 44115			2874	

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/522,042

Applicant(s)

EASON ET AL.

Examiner

PHAN T.H. PALMER

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 23 is/are rejected.
- 7) ☒ Claim(s) 2-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Phan Palmer
Phan Palmer
Primary Examiner
05/06/2006

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/19/2005.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's cooperation is requested in correcting any error of which applicant may become aware in the specification.

Preliminary Amendment

2. Preliminary Amendment filed 01/19/2005, has been entered.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. The information disclosure statement submitted on 01/19/2005, has been considered by the examiner and made of record. See attached form PTO-1449.

Drawings

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because: see the attached Form PTO-948. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to

avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

6. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-5, and 23 are rejected under 35 U.S.C. 102(a) as being anticipated by Wu et al. (UV WRITTEN BRAGG GRATING ON LiNbO₃ CHANNEL WAVEGUIDES).

The Wu et al. reference discloses in figures 1-3, a method of inducing a surface refractive index modification in ferroelectric material (see figure 2), comprising:

- providing a sample of ferroelectric material (LiNbO₃);

- determining a desired pattern of surface refractive index modification to be induced in the sample; and

- exposing an area of the sample corresponding to the desired pattern to optical radiation to deliver a quantity of optical energy sufficient to induce a permanent surface refractive index modification in the exposed area of the sample.

With regard to claim 1, the Wu et al. reference discloses all the claimed invention.

With regard to claim 2, in which the quantity of optical energy is selected to induce a surface refractive index modification of a desired magnitude, is disclosed in the Wu et al. reference (see figure 1).

With regard to claim 3, in which the quantity of optical energy is determined by controlling one or more of intensity of the optical radiation, fluence of the optical radiation, duration of exposing the area of the sample, and absorption depth of the optical radiation in the sample, is disclosed in the Wu et al. reference.

With regard to claim 4, in which the optical radiation has a sub-micron absorption depth in the sample, is disclosed in the Wu et al. reference.

With regard to claim 5, in which the optical radiation is of an ultraviolet wavelength, is disclosed in the Wu et al reference.

With regard to claim 23, in which the sample comprises a pre-existing structure of altered refractive index, and the desired pattern of surface refractive

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index modification is determined to modify the pre-existing structure, is disclosed in the Wu et al reference.

Allowable Subject Matter

8. Claims 6-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Wu et al reference does not disclose the limitations of claims 6-22.

CONTACT INFORMATION

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHAN T.H. PALMER whose telephone number is (571) 272-2354. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RODNEY B. BOVERNICK can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PTHP
05/06/2006


Phan Palmer
Primary Examiner